

AMENDMENTS TO THE DRAWINGS

Nine (9) sheets of replacement drawings in compliance with 37 C.F.R. § 1.84 are submitted herewith. The submitted drawings are formal drawings intended to replace the drawings previously submitted on April 29, 2005. Figures 1-3 have been designated with a label "Prior Art". Also, Figures 7, 18, 25, 29, 32 and 38 have been provided with a descriptive text label "6" in reference to the level shift circuit. No new matter is added. The Examiner is respectfully requested to acknowledge receipt of these drawings.

Attachment: Nine (9) Replacement Sheets

REMARKS

Claims 1-13 are pending in the application.

Claims 10, 12 and 13 have been canceled without prejudice.

New claims 14-21 have been added to further define the claimed invention.

Claims 1-13 have been examined. Claims 1, 2 and 6 have been rejected under 35 U.S.C. § 112, second paragraph, and claims 1, 3 and 10 have been rejected under 35 U.S.C. § 102(e). Also, claims 2, 4, 5, 6, 7, 8, 9, 10, 12, and 13 have been rejected under 35 U.S.C. § 103(a).

I. Preliminary Matters

A. Drawings

Figures 1-3 have been objected to for not being designated by a legend such as "Prior Art". Applicant has provided amended replacement drawings for Figs. 1-3 (sheets 1-3/38). Applicant therefore respectfully requests that the objections be withdrawn.

The drawings have been objected to as failing to comply with 37 C.F.R. § 1.84(p)(5) for not including the following reference signs mentioned in the description: 3-2, 103, 104, 110, 111, 112, 1021, 1022, 1023 and 1024. Applicant has provided an amended replacement drawing for Fig. 25 (sheet 25/38) to include reference sign 3-2. Amendments to the specification were made in the Preliminary Amendment filed on May 25, 2005. Therefore, in regards to the remaining reference signs, Applicant believes the drawings are in compliance with 37 C.F.R. § 1.84(p)(5).

Figures 7, 18, 25, 29, 32 and 38 have been objected to because these figures allegedly contain unlabeled rectangular boxes. Applicant has provided amended replacement drawings for

Figs. 7, 18, 25, 29, 32 and 38 to include the reference sign “6” for each rectangular box representing the level shift circuit. Applicant has amended the specification to be consistent with these changes. Applicant believes the drawings are in compliance for allowance.

B. Specification

The Examiner has objected to the title of the invention as not being descriptive and has requested the Applicant to provide a new title of the invention. Pursuant to the Examiner’s request, Applicant has amended the title of the invention to further describe the present invention. Applicant respectfully requests the withdrawal of this objection.

C. Claims

Claims 1-4, 6-8 and 12-13 have been objected to due to informalities. Claims 1-4, 6-8 and 12-13 have been amended and Applicant believes these claims are in order for allowance. As such, Applicant respectfully requests the withdrawal of these objections.

II. Formal Matters

Applicant thanks the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of a certified copy of the priority document.

Applicant also thanks the Examiner for considering the references cited with the Information Disclosure Statement filed May 5, 2005.

Applicant also thanks the Examiner for determining that claim 11 contains allowable subject matter. New independent claims 18-21 have been added to include the features deemed allowable by the Examiner. Therefore, Applicant submits claims 18-21 are allowable.

III. Rejection under 35 U.S.C. § 112, second paragraph

Claims 1, 2 and 6 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 2 and 6 have been amended to more clearly define the patentable aspects of the present invention. Applicant submits that the amendments to these claims overcome the rejections. As such, Applicant respectfully requests the withdrawal of these rejections.

IV. Rejection under 35 U.S.C. § 102(e) over U.S.P. 6,373,315 B2 to Tsuji et al. (“Tsuji”)

Claims 1, 3 and 10 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Tsuji. Applicant transverses these rejections.

Applicant submits that claim 1 is not anticipated by Tsuji. For example, claim 1 requires a level shift core circuit, wherein “the level shift circuit comprises: a PMOS cross-coupled latch including a first plurality of PMOSs, a differential PMOS switch including a second plurality of PMOSs, and a differential NMOS switch including a plurality of NMOSs: wherein each PMOS of the second plurality of PMOSs has a source connected to a drain of a PMOS of the first plurality of PMOSs, a drain connected to the level shift output, and a gate connected to one of the control signals from the control circuit; wherein each PMOS of the first plurality of PMOSs has a source connected to the second power supply, a gate connected to the level shift output through the drain of another PMOS of the second plurality of PMOSs, where the other PMOS of the second plurality PMOSs does not share a drain to source connection with the PMOS of the first plurality of PMOSs; and wherein each NMOS of the differential NMOS switch has a source

connected to the ground voltage GND, a drain connected to the level shift output, and a gate connected to the level shift input.”

Tsuji is asserted to disclose all the elements of claim 1. Tsuji relates to a signal potential conversion circuit for converting a first signal having one level of a first potential into a second signal having a second potential and discloses a control circuit which controls a pull-up circuit (col. 9, line 64 - col. 10, line 6 and col. 10, lines 13 - 20). However, Tsuji fails to disclose the above level shift circuit and therefore fails to disclose all the features of claim 1. Applicant submits that claim 1 is patentable for at least this reason presented above.

Claim 3 has been rejected by the Examiner for similar reasons to those given for claim 1. Applicant submits that claim 3 is not anticipated by Tsuji. Since claim 3 contains features that are analogous to the features discussed above in conjunction with claim 1, and since the Examiner has not alleged Tsuji discloses such features, Applicant submits that claim 3 is patentable for analogous reasons.

Furthermore, claim 3 states that a level shift circuit includes a pull-up and pull-down circuit fed from the second power supply for pulling up and/ or pulling down level shift output signals from the level shift core circuit. Figure 10 of the present specification illustrates an exemplary embodiment of a pull-up and pull-down circuit. As shown in Fig. 10 and disclosed in the specification of the present invention, the pull-up and pull-down circuit includes a pull-up circuit *and* a pull-down circuit, capable of performing either a pull-up function, a pull-down function, or *both*, subject to the control of the control circuit (paragraphs 70-74, and 83-84).

The Examiner seems to contend that Fig. 8 of Tsuji discloses a pull-up circuit (transistor pairs 8, 5 and 28, 25), however, the Examiner has not alleged that Tsuji discloses the pull-up and pull-down circuit of claim 3 for pulling up and/or pulling down level shift output signals from the level shift core circuit. Furthermore, Tsuji fails to disclose this feature of claim 3. Therefore, Applicant submits that claim 3 is patentable for at least these reasons.

Since claim 10 has been canceled without prejudice or disclaimer, the rejection of the claim is moot.

V. Rejection under 35 U.S.C. § 103(a)

Claim 5 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuji. The Examiner asserts that it is notoriously well known to use a transistor with a large threshold voltage in order to reduce leakage current. However, the Examiner's assertion does not correct the deficiency with regard to Tsuji. Since claim 5 depends upon claims 1 to 4, Applicant submits that claim 5 is patentable at least by virtue of its dependency.

Since claims 12 and 13 have been canceled without prejudice or disclaimer, the rejection of the claims is moot.

VI. Rejection under 35 U.S.C. § 103(a) as being unpatentable over Tsuji in view of Stopper (USP 3,828,202)

Claims 2, 4 and 10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuji in view of Stopper. Since claims 2 and 4 contain features that are analogous to the features discussed above in conjunction with claims 1 and 3, respectively, and since the Examiner has not alleged that the combination of the Tsuji and Stopper suggest such features,

Applicant submits that claims 2 and 4 are patentable for analogous reasons. Furthermore, Applicant submits that Tsuji, alone or in combination with the Stopper, does not suggest the features discussed above in conjunction with claims 1 and 3 for reasons that are similar to the reasons mentioned above.

Since claim 10 has been canceled without prejudice or disclaimer, the rejection of the claim is moot.

VII. Rejection under 35 U.S.C. § 103(a) as being unpatentable over Tsuji and Stopper

Since claim 12 has been canceled without prejudice or disclaimer, the rejection of the claim is moot.

VIII. Rejection under 35 U.S.C. § 103(a) as being unpatentable over Tsuji and Stopper

Since claim 13 has been canceled without prejudice or disclaimer, the rejection of the claim is moot.

IX. Rejection under 35 U.S.C. § 103(a) as being unpatentable over Tsuji and Stopper

Claim 5 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Tsuji and Stopper. The Examiner asserts that it is notoriously well known to use a transistor with a large threshold voltage in order to reduce leakage current. However, the Examiner's assertion does not correct the deficiency with regard to Tsuji in view of Stopper. Since claim 5 depends upon claims 1 to 4, Applicant submits that claim 5 is patentable at least by virtue of it's dependency.

X. Rejection under 35 U.S.C. § 103(a) over Tsuji in view of U.S.P. 6,388,602 to Yang

Claims 6, 7 and 10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuji in view of Yang. Since claims 6 and 7 contain features that are analogous to the features discussed above in conjunction with claims 1 and 3, respectively, and since the Examiner has not alleged that the combination of the Tsuji and Yang suggest such features, Applicant submits that claims 6 and 7 are patentable for analogous reasons. Furthermore, Applicant submits that Tsuji, alone or in combination with the Yang, does not suggest the features discussed above in conjunction with claims 1 and 3 for reasons that are similar to the reasons mentioned above.

Since claim 10 has been canceled without prejudice or disclaimer, the rejection of the claim is moot.

XI. Rejection under 35 U.S.C. § 103(a) over Tsuji and Yang in view of applicant's prior art Fig. 2

Since claim 12 has been canceled without prejudice or disclaimer, the rejection of the claim is moot.

XII. Rejection under 35 U.S.C. § 103(a) over Tsuji and Yang in view of applicant's prior art Fig. 3

Since claim 13 has been canceled without prejudice or disclaimer, the rejection of the claim is moot.

XIII. Rejection under 35 U.S.C. § 103(a) over the combination of Tsuji and Yang

Claim 9 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Tsuji and Yang. The Examiner asserts that it is notoriously well known to use a transistor with a large threshold voltage in order to reduce leakage current. However, the Examiner's assertion does not correct the deficiency with regard to Tsuji in view of Yang. Since claim 9 depends upon one of claims 6, 7, 8, or 14, Applicant submits that claim 9 is patentable at least by virtue of it's dependency.

XIV. Rejection under 35 U.S.C. § 103(a) over the combination of Tsuji and Stopper in view of Yang

Claims 8 and 10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Tsuji and Stopper as applied to claim 4 above, and further in view of Yang. Since claim 8 contains features that are analogous to the features discussed above in conjunction with claim 3, and since the Examiner has not alleged that the combination of the Tsuji and Stopper suggest such features, Applicant submits that claim 8 is patentable for analogous reasons. Furthermore, Applicant submits that Tsuji, alone or in combination with the Stopper, does not suggest the features discussed above in conjunction with claim 3 for reasons that are similar to the reasons mentioned above.

Since claim 10 has been canceled without prejudice or disclaimer, the rejection of the claim is moot.

XV. Rejection under 35 U.S.C. § 103(a) over Tsuji, Stopper and Yang in view of applicant's prior art Fig. 2

Since claim 12 has been canceled without prejudice or disclaimer, the rejection of the claim is moot.

XVI. Rejection under 35 U.S.C. § 103(a) over Tsuji, Stopper and Yang in view of applicant's prior art Fig. 3

Since claim 13 has been canceled without prejudice or disclaimer, the rejection of the claim is moot.

XVII. Rejection under 35 U.S.C. § 103(a) over the combination of Tsuji, Stopper and Yang

Claim 9 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Tsuji, Stopper and Yang. The Examiner asserts that it is notoriously well known to use a transistor with a large threshold voltage in order to reduce leakage current. However, the Examiner's assertion does not correct the deficiency with regard to Tsuji in view of Yang. Since claim 9 depends upon one of claims 6, 7, 8, or 14, Applicant submits that claim 9 is patentable at least by virtue of it's dependency.

XVIII. Conclusion

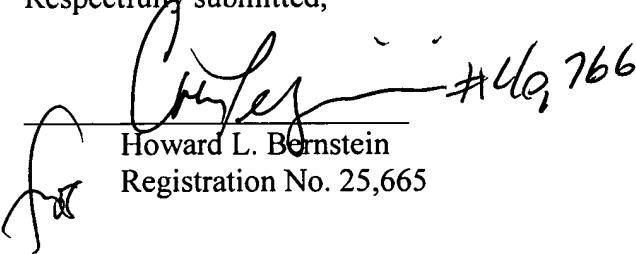
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/533,807

Attorney docket No. Q87901

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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